

REMARKS

I. Formalities

Claims 1-6, 9, 10, 28-31, and 35-39 remain in the subject patent application. Claims 1, 4, 28-30, and 35 are amended and no claims are canceled herein. Claims 7, 8, 11-27, and 32-34 were canceled in an earlier paper. No claims are added herein. Support for the claim amendments can be found at least in paragraph 23 and in FIG. 1A of the originally-filed patent application. Certain claims were amended in order to address typographical or other minor errors therein. Accordingly, Applicant respectfully submits that no new matter is added herein.

II. Response to the Claim Objections

Claims 4, 29, 30, and 35 were objected to because they were said to contain typographical errors. Applicant was unable to find any typographical errors in claim 30 and so has not made any amendments to that claim. Claims 4, 29, and 35, however, have been amended herein to remove typographical errors found therein. Accordingly, Applicant respectfully requests that the objections to claims 4, 29, 30, and 35 be withdrawn.

III. Response to the 35 U.S.C. §112 Rejections

Claim 35 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 35 has been amended herein in order to more clearly indicate the structural relationship of the composite with respect to the nickel layer and the base portion. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §112, second paragraph be withdrawn.

IV. Response to the 35 U.S.C. §102 Rejections

Claims 1-2, 5, 9, 30, 31, and 36 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by JP 62202027 A to Yanagawa (hereinafter “Yanagawa”). These rejections are respectfully traversed in view of the remarks made below.

Anticipation requires each element of a claimed invention to be disclosed in a single reference. Disclosure cannot be predicated on teachings in a reference that are vague or based upon conjecture. It is respectfully submitted that silence in a reference is not a proper substitute for an adequate disclosure of facts from which a conclusion of anticipation may justifiably follow. A proper anticipation rejection under 35 U.S.C. §102 requires that each element of a claimed invention be disclosed in a single reference having the same elements, united in the same way, and performing the same function.

A. Remarks Directed to Claims 1 and 30

Claim 1 has been amended herein to require that the pattern comprise a plurality of raised portions and a plurality of recessed portions. This limitation is described at least in paragraph 23 and in FIG. 1A of the originally-filed patent application. The limitation is not shown or disclosed by Yanagawa. Instead, Yanagawa discloses a tapping screw having a single hardened point. It is Applicant’s position that this tapping screw does not exhibit a pattern for impression on a substrate at all, but in any case the tapping screw does not represent a pattern having a plurality of raised portions and a plurality of recessed portions as required by amended claim 1. Claim 30 has been amended herein to require the same limitation as that discussed above for claim 1.

Based on the foregoing, Applicant respectfully submits that amended claims 1 and 30 are allowable. Withdrawal of the 35 U.S.C. §102 rejection of amended claims 1 and 30, and allowance of the claims, is therefore respectfully requested.

B. Remarks Directed to Claims 2, 5, 9, and 36

Dependent claims must be construed to include all of the limitations of the claims from which they depend, as required by 37 C.F.R. 1.75(c) and M.P.E.P. 608.01(n). Therefore, claims 2, 5, and 9, which depend from amended claim 1, and claim 36, which depends from amended claim 30, are also not shown or disclosed by Yanagawa for at

least the same reasons as listed earlier for amended claims 1 and 30. Accordingly, Applicant respectfully submits that claims 2, 5, 9, and 36 are allowable at least because of their dependence from an allowable claim. Withdrawal of the 35 U.S.C. §102 rejections of claims 2, 5, 9, and 36, and allowance of the claims, is therefore respectfully requested. Claim 31 depends from claim 28 and will be addressed below.

V. Response to the 35 U.S.C. §103 Rejections

Claims 1-6, 9, 10, 28-31, and 35-39 were rejected under 35 U.S.C. §103(a) (or, in the alternative, under 35 U.S.C. §102(b)) as allegedly being unpatentable over U.S. Patent No. 5,100,739 to Kuruma et al (hereinafter “Kuruma”). These rejections are respectfully traversed in view of the remarks made below.

In order for the Examiner to establish a prima facie case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. M.P.E.P. §2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

A. Remarks Directed to Claim 1 and 28-30

Claim 1 requires a tool comprising a base portion including a pattern for impression on a substrate. The Office Action admits that Kuruma is silent as to this claim requirement (leading to the conclusion, Applicant respectfully submits, that the claim cannot be properly rejected under 35 U.S.C. §102) but opines that the limitation would be obvious because Kuruma’s plated metal sheet is used for pressing and as such must include some sort of surface topography. For several reasons, Applicant respectfully disagrees with this assumption, as discussed below.

First, the microtool of the present invention is formed such that it will impress a pattern in a dielectric layer when it is pressed against the dielectric layer. In contrast, Kuruma's plated metal sheet is used as a separator between sets of laminated sheets that are to become a printed circuit board. It is important that these laminated sheets do not sustain flaws during the manufacturing process but such flaws would be introduced to copper foil layers of the sets of laminated sheets if anything (such as excess epoxy resin) protruded from the plated metal separator sheets. (See, e.g., column 2, lines 49-59 of Kuruma.) In other words, Kuruma clearly teaches away from a structure having a patterned surface because a patterned surface would introduce unwanted flaws to the copper sheets of the printed circuit board.

Second, it is respectfully submitted that because Kuruma's plated sheet is not used for pressing in the same sense that Applicant's microtool is used for pressing, as discussed above, the pressing taught by Kuruma is not the sort of pressing that suggests surface topography in the metal sheet. To say it another way, the pressing in Kuruma is not the sort of pressing that embosses or patterns a surface but rather the sort that forces together two or more objects in order to join the objects together.

Third, although FIG. 2 and the accompanying text discloses fluorocarbon polymer particles (5) exposed on the surface of a composite metal plating layer (4), these fluorocarbon particles do not constitute a pattern on a base portion of a tool (as required by claim 1) because: (a) they are never said to impress a pattern in another material; and (b) they perform their intended purpose (imparting "strippability" to the plated sheet) better when they do not protrude randomly from the surface of the plating layer but rather are melted to form a smooth surface above the surface of the plating layer (see, e.g., column 9, lines 11-13 and column 11, lines 32-39 of Kuruma).

Based on the foregoing, Applicant respectfully submits that claim 1 is allowable. Withdrawal of the 35 U.S.C. §103 rejection of claim 1, and allowance of the claim, is therefore respectfully requested. Claims 28, 29, and 30 each contain limitations similar or identical to those discussed above in connection with claim 1 and are thus thought to be allowable for reasons similar to those discussed above for claim 1. Withdrawal of the 35

U.S.C. §103 rejections of claims 28-30, and allowance of the claims, is therefore also respectfully requested.

B. Remarks Directed to Claims 2-6, 9, 10, 31, and 35-39

As stated above, dependent claims must be construed to include all of the limitations of the claims from which they depend, as required by 37 C.F.R. 1.75(c) and M.P.E.P. 608.01(n). Therefore, claims 2-6, 9, and 10, which depend from amended claim 1, claims 31 and 37, which depend from claim 28, claims 35 and 36, which depend from claim 30, and claims 38 and 39, which depend from claim 29, are also not taught or suggested by Kuruma for at least the same reasons as listed earlier for claims 1, 28, 29, and 30. Accordingly, Applicant respectfully submits that claims 2-6, 9, 10, 31, and 35-39 are allowable at least because of their dependence from an allowable claim. Withdrawal of the 35 U.S.C. §102 rejections of claims 2-6, 9, 10, 31, and 35-39, and allowance of the claims, is therefore respectfully requested.

CONCLUSION

Applicant has made an earnest attempt to place this case in condition for allowance. In light of the amendments and remarks set forth above, Applicant respectfully requests reconsideration and allowance of all of the pending claims.

No fees are believed to be due in connection with this Response. However, the Commissioner for Patents is hereby authorized to charge any fees due, or credit any overpayment, to Account No. 50-0221.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicant invites Examiner Lam to call the undersigned attorney at the Examiner's convenience.

Respectfully submitted,

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